

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)
2. (previously presented) The laser submount of claim 17, wherein the substrate is selected from the group consisting of silicon, quartz, sodium borosilicate glass, sapphire, gallium arsenide, silicon carbide, and gallium phosphide.
3. (previously presented) The laser submount of claim 17, further comprising:
an interconnect above the planarization layer.
4. (currently amended) The laser submount of claim 3, wherein the planarization layer ~~is~~ comprises an oxide layer.
5. (currently amended) The laser submount of claim 3, wherein the top layer comprises a dielectric layer covering the interconnect, the laser submount further comprising:
a contact pad dielectric layer, ~~wherein to electrically connect the laser is electrically connected to the contact pad.~~ wherein to electrically connect the laser is
6. (previously presented) The laser submount of claim 5, further comprising:
a sealing ring above the dielectric layer and surrounding the contact pad and the laser.

7. (previously presented) The laser submount of claim 17, further comprising:
at least one of a passive integrated circuit and an active integrated circuit.

8-16. (canceled)

17. (currently amended) A laser submount ~~on top of which a laser is mounted, to~~
mount a laser, the laser submount comprising:

a substrate;
~~an alignment post;~~
~~a lens above the substrate and below the laser;~~
~~a planarization layer covering the lens on the substrate;~~
~~a top layer on the planarization layer, the top layer to mount the top of which a~~
~~laser is mounted, the top layer being above the lens;~~
an alignment post coupled to the substrate opposite the planarization layer; and
a lens on the substrate between the substrate and the planarization layer, the lens
to receive wherein the lens directs light from the laser, through the planarization layer
and the top layer, and to direct the light through a body of the substrate into the alignment
post; the alignment post opposite the planarization layer and the top layer, wherein the
lens comprises a surface to provide at least one focal length to focus the light near an end
of the alignment post, and wherein the substrate, the planarization layer, and the top layer
are transparent to the light.
~~such that the light directed from the lens is focused near the end of the alignment~~
~~post.~~

18. (currently amended) The laser submount of claim 17 wherein the lens ~~is~~
comprises a bifocal diffractive lens that provides comprising a surface with ridges to
provide two focal lengths.

19. (currently amended) The laser submount of claim 17 wherein the lens ~~is~~
comprises a hybrid diffractive/refractive element that provides comprising a surface with
a curvature to provide one focal length.

20. (currently amended) The laser submount of claim 17 wherein the alignment post ~~is shaped as~~ comprises a hollow cylinder.

21. (currently amended) The laser submount of claim 17 wherein the alignment post ~~is shaped as~~ comprises a solid, transparent cylinder.

22. (currently amended) The laser submount of claim 17 wherein an alignment feature on the alignment post ~~is~~ comprises an outer diameter of the alignment post.

23. (currently amended) The laser submount of claim 17 wherein the alignment post comprises a transparent partial sphere ~~is used as an alignment feature~~.

24. (currently amended) The laser submount of claim 17 wherein the substrate ~~is~~ comprises a silicon wafer of a thickness of 675 microns that is transparent to 1310 nanometer light.

25. (new) The laser submount of claim 3, further comprising:
a plug to electrically connect the interconnect and the contact pad.

26. (new) The laser submount of claim 25, further comprising:
a sealing ring above the dielectric layer and surrounding the contact pad and the laser;
a second contact pad above the dielectric layer and outside of the sealing ring; and
a second plug to electrically connect the interconnect and the second contact pad.

27. (new) A laser submount to mount a laser, the laser submount comprising:
a substrate;
a planarization layer on the substrate;
a top layer on the planarization layer to mount the laser;
a cylindrical alignment post coupled to the substrate opposite the planarization layer; and
a lens on the substrate between the substrate and the planarization layer, the lens to receive light from the laser, through the planarization layer and the top layer, and to direct the light through the substrate into the cylindrical alignment post, wherein the lens comprises a surface to provide a focal length to focus the light near an end of the cylindrical alignment post.
28. (new) The laser submount of claim 27, wherein the cylindrical alignment post comprises a hollow cylinder.
29. (new) The laser submount of claim 27, wherein the cylindrical alignment post comprises a solid, transparent cylinder.
30. (new) A laser submount to mount a laser, the laser submount comprising:
a substrate;
a planarization layer on the substrate;
a top layer on the planarization layer to mount the laser;
a partial spherical alignment feature coupled to the substrate opposite the planarization layer; and
a lens on the substrate between the substrate and the planarization layer, the lens to receive light from the laser, through the planarization layer and the top layer, and to direct the light through the substrate into the partial spherical alignment feature, wherein the lens comprises a surface to provide a focal length to focus the light near an end of the partial spherical alignment feature.